

November 15, 1998

James A. Wades
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Magalie Roman Salas
Office of the Secretary,
Federal Communications Commission
1919 M Street NW
Room 222
Washington, DC. 20554

Dear Ms. Salas:

Enclosed you will find one original and 8 copies of my comments submitted in response to the Commissions' Biennial Regulatory Review of the Amateur Service Rules.

Should you require further information or have any questions, please feel free to contact me at the address above. You may also contact me at:

Telephone: 734-482-3230 (evenings)

734-641-2300 (days)

"e-mail": wb8siw@aol.com

Thank you,


James Wades

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Magalie Roman Salas
Office of the Secretary
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Room 222
Washington, DC. 20554

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In the Matter of:

WT Docket No. 98-143

*1998 Biennial Regulatory Review – Amendment
of Part 97 of the Commission's Amateur Service
Rules*

*RM-9148
RM-9150
RM-9196*

Gentlemen:

In response to your request for input on the proposed restructuring of the Amateur Radio Service, NPRM ---- I would like to offer several comments on the relevancy of both the radiotelegraph examination requirements as well the current licensing structure.

Licensing Structure:

First of all, the premise that the current licensing structure is no longer relevant holds considerable merit. It is obvious to even the most casual observer that the Novice Class License is no longer the preferred "gateway" into the Amateur Radio Service. Today, this role is fulfilled by the "No-Code" Technician Class License. With its almost unlimited access to the VHF and UHF Amateur bands, this license has the potential to attract a broad range of new Amateur Radio operators in the future.

Perhaps a more difficult subject is the Technician-Plus License. This license has failed to serve as a "gateway" to the High Frequency ("HF") portion of the spectrum for many Amateurs. The fact that this License Class offers very little incentive for many Amateurs to upgrade is no doubt due to the fact that passage of the five word-per-minute radiotelegraph ("CW") examination element affords few new privileges. Therefore, it would seem logical to offer additional incentives for upgrading to the "Technician-Plus" License. I recommend that additional limited High Frequency SSB privileges be granted

in several of the more commonly used Amateur Radio bands in addition to the CW privileges currently granted in the Novice portion of the spectrum. For example, upon demonstration of suitable proficiency in CW operations at 5-wpm, the Technician Licensee would gain access to the following HF sub-bands:

- 3.675 to 3.725 MHz (digital and CW) 3.900 MHz to 4.000 MHz (SSB, digital, CW)
- 7.100 to 7.150 MHz (digital and CW) 7.225 MHz to 7.300 MHz (SSB, digital, CW)
- 21.100 to 21.200 MHz (digital & CW) 21.350 to 21.450 MHz (SSB, digital, CW)
- Full privileges on the 28 MHz (10 Meter) band (SSB, digital, CW).

The General Class License as currently in-force also has considerable merit. This license has historically served as the "standard" Amateur License. It offers broad access to the all portions of the Amateur bands. While the theory exam is certainly not excessively difficult for the individual with a reasonable interest in the Amateur Service, many appear to have difficulty with the 13-wpm radiotelegraph exam. Over the years, research has indicated that many students of "CW" reach a learning plateau at speeds slightly over 10 words-per-minute. As a matter of fact, during much of the history of the Amateur Service, the General Class License exam required the applicant to demonstrate proficiency in CW at 10-wpm, primarily for this reason. It would appear that by lowering the CW examination requirement to this level, considerably more individuals would have access to General Class privileges.

Some Amateur Radio organizations have suggested lowering the General Class CW examination to 5 wpm. This seems unwise. At this speed the applicant will have demonstrated little more than the ability to memorize the characters. From a practical perspective, proficiency at this level is only a starting point and little more. The 10-wpm speed on the other hand moves CW proficiency from the "memorization" phase to the most elementary "language" phase, thereby demonstrating the ability to communicate at a minimally efficient level with the Radiotelegraph Code.

In addition to the elimination of the Novice Class License, it seems appropriate to take a "hard" look at the current Advanced Class license. Upon close observation, it would appear that the differences between the General and Advanced licenses are minimal. Both licenses currently require identical radiotelegraph proficiency. Both licenses require similar theory exams. The reality is that the Advanced Class license is a somewhat artificial construct dating back to the "Incentive Licensing" proposal put-forth by the American Radio Relay League in the 1960s. If the Commission wishes to minimize administrative burden, a good place to start would be *elimination of the Novice and Advanced Class Licenses*.

The Extra Class Amateur License on the other hand, still has merit. This license requires that the applicant demonstrate significant knowledge of a broad portion of the radio art. The existence of this license provides a portion of the Amateur Radio population with a "goal" to work toward while further expanding their knowledge of the radio art. The minimal additional privileges associated with this class of license deny very little spectrum to those holding other classes of Amateur License. If it is the intention of the

Commission to hold to the concept that Amateur Radio exists partly to provide a pool of operators proficient in the science and art of radio, than it is my strong recommendation that this license be kept in tact. With respect to the 20-wpm radiotelegraph examination, it is my strong recommendation that this element be kept in tact. The license itself is highly specialized in nature and is specifically designed for a small segment of the Amateur Radio population desiring the opportunity to demonstrate unusual skill and ability. It seems logical that this Class of License has little impact on the growth of Amateur Radio.

Based on this discussion, it is therefore my recommendation that the Amateur Radio licensing structure be modified in the following manner:

- Eliminate the Novice Class License entirely. Give all current Novice Licensees Technician-Plus privileges in order to “grandfather” them into the new licensing structure.
- Maintain the existing Technician (“No-Code”) License. This license is an ideal “gateway” into Amateur Radio.
- Maintain the existing Technician-Plus License. Provide limited additional HF privileges as an additional incentive for new Radio Amateurs to upgrade.
- Maintain the existing General Class License. Decrease the radiotelegraph examination element to 10-wpm. Do NOT decrease it to the proposed 5-wpm.
- Eliminate the Advanced Class license. Give all current Advanced Class Licensees Amateur Extra Class License privileges in order to “grandfather” them into the new licensing structure.
- Maintain the existing Amateur Extra Class license. Maintain the radiotelegraph examination element speed at 20-wpm.

What should be done with the Novice Frequencies?

The elimination of the Novice Class license begs the question; “What should be done with the Novice portions of the Amateur Radio HF allocations?”

In light of the proposal to maintain the Technician-Plus license, it would seem likely that the Novice CW sub-band should be maintained for use by those desiring to operate using radiotelegraph or digital communications methods. This would continue the practice of providing limited access to the High Frequency Spectrum for those Technicians who have demonstrated some very limited proficiency in radiotelegraphy.

If it is the desire of the Commission and the Amateur Radio Community to foster technical development and experimentation within the Service, we should keep in mind that these advances will most likely occur in the areas of digital communications and new

narrow-bandwidth communications technologies. By definition, these new modes of communications should be compatible with more traditional narrow-bandwidth modes such as Radiotelegraphy and Radio-Teletype. Therefore, the existing Novice CW sub-bands should remain allocated to CW and digital communications modes. Any increase in SSB allocations at the expense of the CW portion of the spectrum poses the risk of "stunting" the growth and use of these new digital communications modes. Therefore, it is our recommendation that the former Novice bands be kept intact and be made available only to CW and digital communications.

Is Radiotelegraphy Relevant?

This discussion, of course, brings us to the issue of the relevancy of radiotelegraphy itself. There are a number of individuals and organizations, which will argue that the radiotelegraph examination is no longer relevant in light of recent advances in telecommunications. It is my position that this mode still has a significant role to play in the Amateur Radio Service. When one examines the debate closely, the following interesting points arise:

- 1) An attempt is often made to compare the Amateur Radio Service with commercial or military organizations, many of whom no longer rely extensively on High Frequency radiotelegraph circuits. What is conveniently overlooked however, is that these later organizations now have access to extensive satellite communications networks, thereby eliminating the need for High Frequency communications altogether. It is interesting to note that until which time these satellite-based modes of communications became available, such agencies as the military and maritime organizations maintained an extensive investment in radiotelegraph circuits and operators!

Unlike commercial and military organizations, Amateur Radio operators must still rely on the High Frequency portion of the spectrum for the majority of its medium and "long-haul" communications capabilities. With it's attendant propagation anomalies, such as selective fading, solar flares, geomagnetic disturbances, and variations in useable frequency due to variations in the solar cycle, the High Frequency spectrum often renders modes such as Single-Sideband and complex digital modes useless. It is in this portion of the radio spectrum that radiotelegraph circuits are often necessary due to the significant variations in Signal to Noise ration presented by these propagation anomalies.

- 2) Radiotelegraphy offers some other significant advantages, some of which may be summarized as follows:
 - A) CW operation facilitates International communications by overcoming many language barriers through the use of standardized international abbreviations and codes.
 - B) The narrow bandwidth of a CW signal offers significantly superior spectrum efficiency over such modes as Single-Sideband.

- C) The narrow bandwidth of a CW signal affords better readability than other modes on communications circuits operating under poor signal-to-noise ratios.
- D) The simplicity of CW equipment affords Amateur Radio Operators of limited means the opportunity to participate in both Nation-wide and International communications with a minimal investment in equipment and material.
- E) CW equipment is ideally suited to low-power portable operations, particularly when using emergency or temporary antennas and battery power.

The fact that CW offers significant reliability on High Frequency communications circuits is not an opinion; it's a fact! In order to illustrate this point I need only refer the Commission to the following recent examples:

The first incident occurred during a Michigan State Police & Grand Traverse County, Michigan joint emergency communications exercise in October of this year. During this exercise, Amateur Radio operators were asked by the Michigan State Police to establish a communications circuit between Grand Traverse County and the State Emergency Operations Center ("EOC") at Lansing. First, a VHF linked repeater system was tried. This failed due to a technical problem. Second, a 3.9 MHz SSB radiotelephone circuit was tried. This failed due to poor propagation. Next, a 7 MHz SSB radiotelephone circuit was tried. This too failed due to poor High Frequency propagation and excessive noise levels at the State Emergency Operations Center. Finally, communications was established using CW on 7 MHz. All communications traffic was passed quickly and efficiently using radiotelegraphy, with no need for repeats, fill requests, and so forth.

As a second illustration, I would like to point out experiences gained while participating in the Michigan Net ("QMN"). This network is the Nation's oldest Amateur Radio emergency communications network, having been established in late 1935. All operations are conducted using CW. In recent years, the Michigan Net has entered into an agreement with the National Weather Service to collect precipitation data from throughout the State of Michigan during various weather events, such as floods and winter storm emergencies. During the recent Solar-minimum, when High Frequency propagation conditions were such that similar SSB radiotelephone nets (operating on the same band) were unable to meet, the Michigan Net has been able to reliably meet night-after-night with only very rare outages. Not only was the Michigan Net able to meet, but large quantities of precipitation data have been collected and passed to the National Weather Service (several thousand reports over the past two and one half years). Again, let me stress that much of this work has been done when SSB radiotelephone nets are simply unable to meet!

I could offer plenty of additional examples gained from experience in public service communications. However, the two noted above should serve to illustrate my point.

Unfortunately, it seems that many of those who suggest that CW is no longer relevant are the same individuals who have very limited experience with the mode. One should not base an analysis of the relative merits of a particular skill or mode of communications on

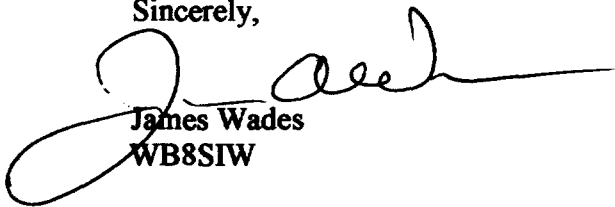
insufficient observation. The Commission is cautioned to consider carefully the opinions of those who have little practical experience with CW communications.

Perhaps the day will come when Amateur Radio operators will have access to a stable platform of geo-stationary satellites or a network of Low-Earth-Orbiting satellites designed for World-wide digital communications. Additions or modifications to the rules designed to encourage the development of this type of technology may even be in order. Until then however, it would appear to this observer that CW is not only alive and well within the Amateur Radio service, but quite relevant and necessary for reliable High Frequency communications.

In conclusion, I would encourage the Commission to simplify the Amateur Licensing structure. However, this must be done in such a way that Amateur Radio remains a viable public service while encouraging the integration and development of new communications technologies. This can not be done by simply granting increased High Frequency SSB radiotelephone privileges to a broad range of "potential" Radio Amateurs.

Thank you for your time and consideration.

Sincerely,



James Wades
WB8SIW

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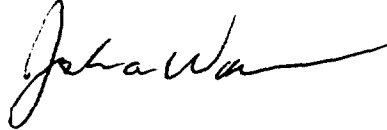
ARS W9BFO
John A Warren
2908 Jamison
Mt Vernon, IL 62864
November 24, 1998

Federal Communication Comm.
Washington, DC.

Dear Sir:

In the matter of WT Docket 98-143, the proposed rule eliminating the 5 wpm cw based novice and tech plus licence. After 40 plus years of being a amateur radio operator, I would be in favor of the 5 wpm cw elimination only if the written test is made more complicated to make up the difference. The dumbing down of the amateur radio community has gone far enough.

John A Warren



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